LISTING OF THE CLAIMS

1-48. (Cancelled)

49. (Withdrawn) The method of claim 43, wherein said infectious diseases are viral, mycotic or bacterial diseases.

50-60. (Cancelled)

61. (New) A method for the ex vivo activation of NK- cells, comprising: contacting NK cells in physiological suspension with an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO.: 1, a C-terminal fragment of Hsp70, wherein said fragment comprises amino acids 384-641 of SEQ ID NO.: 1, and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.: 1, wherein said isolated protein, fragment, or polypeptide induce an immune response by NK cells, and further said response increases cytolytic activity of the NK cells or stimulates proliferation of the NK cells.

62. (New) The method of claim 61, wherein said activation of said cells further comprises stimulation of proliferation and/or an increase in cytotoxicity.

63. (New) The method of claim 61, wherein said physiological suspension containing NK cells comprises a peripheral mononuclear blood cell fraction or fractions thereof.

64. (New) The method of claim 61, wherein said suspension further comprises cells expressing cell-surface Hsp70.

65. (New) The method of claim 64, wherein said expressing cells comprise diseased cells from a patient.

66. (New) The method of claim 65, wherein said diseased cells are selected from the group consisting of leukemia cells, lymphoma cells, tumor cells, metastasizing cells of solid tumors and cells from a virally, mycotically and/or bacterially infected patient.

67. (New) The method of any one of Claims 61-66, wherein said contacting is carried out for at least 3 hours.

68. (New) The method of claim 67, wherein said contacting is carried out for 4 days.

69. (New) The method of claim 67, wherein said conditions further comprise addition of cytokine.

70. (New) The method of claim 69, wherein the cytokine is an interleukin.

71. (New) The method of claim 70, wherein said interleukin is selected from the group consisting of IL-2, IL-12 and IL-15.

72. (New) A method for the in vivo activation of the immune system in a patient in need thereof comprising:

i) administering to said patient a pharmaceutically effective amount of NK cells obtained by the method of claim 61; and

ii) optionally administering to said patient, concurrently or subsequently, a pharmaceutically effective amount of an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO: 1, a C-terminal fragment of Hsp70, wherein said fragment comprises amino acids 384-641 of SEQ ID NO.: 1, and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.: 1, wherein said isolated protein, fragment, or polypeptide induces an immune response by NK cells, and wherein said

response increases cytolytic activity of the NK cells or stimulates proliferation of the NK cells.

73. (New) The method of claim 72, where said patient is suffering from a disease selected from the group consisting if cancerous, infectious and autoimmune disease.

74. (New) The method of claim 72, further comprising administering a cytokine.

75. (New) The method of claim 74, wherein said cytokine is an interleukin.

76. (New) The method of claim 75, wherein said interleukin is selected from the group consisting of IL-2, IL-12 and IL-15.

77. (New) The method of claim 73, wherein said cancerous disease is selected from the group consisting of tumors, solid tumors, metastic tumors, leukemias and lymphomas.

78. (New) A pharmaceutical composition comprising an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO.:1, a C-terminal fragment of Hsp70, wherein said fragment comprises amino acids 384-641 of SEQ ID NO.: 1, and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.: 1, wherein said isolated protein, fragment, or polypeptide induces an immune response by NK cells, and wherein said response increases cytolytic activity of the NK cells or stimulates proliferation of the NK cells; and a pharmaceutically acceptable carrier or excipient.

79. (New) The composition of claim 78, wherein said protein, polypeptide or fragment is present at a concentration of about 1 μg/ml to about 1000μg/ml.

80. (New) The composition of claim 78, wherein said protein, polypeptide or fragment is of human origin.

81. (New) The composition of claim 78, wherein said protein, polypeptide or fragment is recombinant.

82. (New) A pharmaceutical composition comprising NK cells activated by the method of claim 61.

83. (New) A method for in vivo activation of the immune system in a patient in need thereof comprising administering to said patient a pharmaceutically effective amount of an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO.:1, a C-terminal fragment of Hsp70, wherein said fragment comprises amino acids 384-641 of SEQ ID NO.: 1, and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.: 1; wherein said isolated protein, fragment, or polypeptide induces an immune response by NK cells, and wherein said response increases cytolytic activity of the NK cells or stimulates proliferation of the NK cells.

84. (New) The method of claim 83, where said patient is suffering from a disease selected from the group consisting of cancerous, infectious and autoimmune disease.

85. (New) The method of claim 83, further comprising administering a cytokine.

86. (New) The method of claim 85, wherein said cytokine is an interleukin.

87. (New) The method of claim 86, wherein said interleukin is selected from the group consisting of IL-2, IL-12 and IL-15.